

wherein an [the] E1 gene has been rendered non-functional by deletion, and wherein an [the] E2 or E4 gene has [genes have] been rendered non-functional by deletion.

2. (Twice Amended) An adenovirus according to claim 1, wherein [characterized in that the] adenovirus sequences are from a canine adenovirus.

3. (Thrice Amended) An adenovirus according to claim 1, wherein [characterized in that the] adenovirus sequences are from a human group C adenovirus.

6. (Thrice Amended) An adenovirus according to claim 1, wherein [characterized in that the] late genes L1-L5 have been rendered non-functional by deletion.

9. (Twice Amended) An adenovirus according to claim 1, wherein [characterized in that the] an E3 gene has been rendered non-functional by deletion.

10. (Twice Amended) An adenovirus according to claim 9, wherein [characterized in that the] an L5 gene has been rendered non-functional by deletion.

12. (Thrice Amended) An adenovirus according to claim 1, wherein [characterized in that] the heterologous DNA sequence is selected from the group consisting of therapeutic genes and genes encoding antigenic peptides.

13. (Thrice Amended) An adenovirus according to claim 12, wherein [characterized in that] the heterologous DNA is a therapeutic gene which encodes a product selected from the group consisting of enzymes, blood [derivatives] proteins, hormones, lymphokines, growth factors, [neurotransmitters, precursors of neurotransmitters, synthetic enzymes, trophic] neurotrophic factors, apolipoproteins, dystrophin, minidystrophin, tumor [suppressor] suppressor genes, and [genes encoding factors involved in] coagulation factors.

14. (Twice Amended) An adenovirus according to claim 1, wherein [characterized in that] the heterologous DNA encodes an antisense sequence.

15. (Twice Amended) An adenovirus according to claim 12, wherein [characterized in that] the heterologous DNA encodes an antigenic peptide capable of generating an immune response against microorganisms, tumors, or viruses.

16. (Twice Amended) An adenovirus according to claim 15, wherein [characterized in that] the gene encodes an antigenic peptide specific for a virus selected from the group consisting of the Epstein Barr virus, the HIV virus, the hepatitis B virus, and the pseudo-rabies virus.

20. (Thrice Amended) A cell line according to claim 19, wherein [characterized in that] it comprises, in its genome, an E1 gene and an E2 gene wherein the E2 gene is under the control of an inducible promoter.

21. (Twice Amended) A cell line according to claim 20, wherein [characterized in that] it additionally comprises the E4 gene from an adenovirus.

22. (Thrice Amended) A cell line according to claim 19, wherein [characterized in that] it comprises, in its genome, an E1 gene and an E4 gene wherein the E4 gene is under the control of an inducible promoter.

24. (Thrice Amended) A cell line according to claim 19, wherein [characterized in that] it comprises E2 and E4 genes and the E2 and E4 genes are under the control of an inducible promoter.

25. (Twice Amended) A cell line according to claim 19, wherein [characterized in that] the inducible promoter is [the] an LTR promoter of MMTV.

26. (Thrice Amended) A cell line according to claim 19, wherein [characterized in that] it comprises a gene encoding the 72 K protein of E2.

27. (Twice Amended) A cell line according to claim 19, wherein [characterized in that] it is obtained from the line 293.

31. (Twice Amended) A defective recombinant adenovirus comprising [the] ITR sequences, an encapsulation sequence, and a heterologous DNA sequence, wherein [the] E3 and E4 genes have been rendered non-functional by deletion.

32. (Amended) An adenovirus according to claim 31, wherein [characterized in that the] late genes L1-L5 have been rendered non-functional by deletion.

33. (Amended) A cell line according to claim 19, comprising [characterized in that it comprises the] open reading frames ORF6 and ORF6/7 of E4.

34. (Twice Amended) A defective recombinant adenovirus consisting essentially of

[the] ITR sequences,  
an encapsulation sequence,  
a heterologous DNA sequence, and  
all or part of an E2 gene,

wherein the E2 gene or part thereof is the sole adenoviral gene.

35. (Twice Amended) A defective recombinant adenovirus consisting essentially of